

SEQUENCE LISTING

<110> FAGAN, RICHARD JOSEPH
 PHELPS, CHRISTOPHER BENJAMIN
 RODRIGUES, TANIA MARIA
 POWER, CHRISTINE
 DE TIANI, MARIASTELLA

<120> SPLICE VARIANT OF HUMAN PLACENTAL GROWTH HORMONE

<130> C&R-106

<140> US 10/539,962
 <141> 2005-06-17

<150> PCT/GB03/05594
 <151> 2003-12-19

<150> GB 0229850.3
 <151> 2002-12-20

<160> 37

<170> SeqWin99, version 1.02

<210> 1
 <211> 180
 <212> DNA
 <213> Homo sapiens

<400> 1
 gctcccgagg gtcctgtgtc ctggcttttg gctgtgtgtg cctgtcctgg ctccaagagg 60
 gcagtgccct cccaaccalt cccttatcca ggctttttga caacgctatg ctcgcgcgcc 120
 gtcgctgtga ccagctggca tatgacacct atcaggagtt tgtaagctct tgggtaattg 180

<210> 2
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 2
 Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly Leu Leu Cys Leu Ser Trp
 1 5 10 15

Leu Gln Glu Gly Ser Ala Phe Pro Thr Ile Pro Leu Ser Arg Leu Phe
 20 25 30

Asp Asn Ala Met Leu Arg Ala Arg Leu Tyr Gln Leu Ala Tyr Asp
 35 40 45

Thr Tyr Gln Glu Phe Val Ser Ser Trp Val Met Glu
 50 55 60

<210> 3
 <211> 47

```

<212>  DNA
<213>  Homo sapiens

<400>  3
agtctattcc aacaccttcc aacagggtga aaacgcagca gaaatct 47

<210>  4
<211>  15
<212>  PRT
<213>  Homo sapiens

<400>  4
Ser Ile Pro Thr Pro Ser Asn Arg Val Lys Thr Gln Gln Lys Ser
1          5          10          15

<210>  5
<211>  227
<212>  DNA
<213>  Homo sapiens

<400>  5
gtctccggac gtccctgctc ctggtttttg gctgtctctg cctgtcctgg ctccaagagg 60
gcagtgccctt cccaaccatt cccttatcca ggctttttga caacgctatg ctccgcgccc 120
gtcgcctgta ccagctggca tatgacacct atcaggagtt tgtaagctct tgggtaatgg 180
agtctattcc aacaccttcc aacagggtga aaacgcagca gaaatct 227

<210>  6
<211>  75
<212>  PRT
<213>  Homo sapiens

<400>  6
Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly Leu Leu Cys Leu Ser Trp
1          5          10          15

Leu Gln Glu Gly Ser Ala Phe Pro Thr Ile Pro Leu Ser Arg Leu Phe
20          25          30

Asp Asn Ala Met Leu Arg Ala Arg Arg Leu Tyr Gln Leu Ala Tyr Asp
35          40          45

Thr Tyr Gln Glu Phe Val Ser Ser Trp Val Met Glu Ser Ile Pro Thr
50          55          60

Pro Ser Asn Arg Val Lys Thr Gln Gln Lys Ser
65          70          75

<210>  7
<211>  600
<212>  DNA
<213>  Homo sapiens

<400>  7
atggctgcag gctcccgagc gtccctgctc ctggcttttg gctgtctctg cctgtcctgg 60
ctccaagagg gcagtgccct cccaaccatt cccttatcca ggctttttga caacgctatg 120

```

```

ctccgcgcgc  gtgcgcctgta  ccagctggca  tatgacacct  atcaggagtt  tgtaagctct  180
tgggtaaatg  agtctattcc  aacaccttcc  aacagggtga  aaaccgcagc  gaaatctaac  240
ctagagctgc  tccgcattcc  cctgctgctc  atccagtcac  ggctggagcc  cgtgcagctc  300
ctcaggagcg  tcttcgcca  cagcctgggt  tatggcgcc  cggacagcaa  cgtctatcgc  360
cacctgaagg  acctagagga  aggcattcaa  acgctgatgt  ggaggctgga  agatggcagc  420
cccgcgactg  ggcagatctt  caatcagtc  tacagcaagt  ttgacacaaa  atcgacaaac  480
gatgcgcac  tgctcaagaa  ctacgggctg  ctctactgct  tcaggaagga  catggacaag  540
gtcgagacat  tctctgcgat  cgtgcagtgc  cgctctgtgg  agggcagctg  tggcttctag  600

```

```

<210>      8
<211>    199
<212>    PRT
<213>    Homo sapiens

```

```

<400>      8
Met Ala Ala Gly Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly Leu Leu
1              5              10              15

Cys Leu Ser Trp Leu Gln Glu Gly Ser Ala Phe Pro Thr Ile Pro Leu
20              25              30

Ser Arg Leu Phe Asp Asn Ala Met Leu Arg Ala Arg Arg Leu Tyr Gln
35              40              45

Leu Ala Tyr Asp Thr Tyr Gln Glu Phe Val Ser Ser Trp Val Met Glu
50              55              60

Ser Ile Pro Thr Pro Ser Asn Arg Val Lys Thr Gln Gln Lys Ser Asn
65              70              75              80

Leu Glu Leu Leu Arg Ile Ser Leu Leu Leu Ile Gln Ser Trp Leu Glu
85              90              95

Pro Val Gln Leu Leu Arg Ser Val Phe Ala Asn Ser Leu Val Tyr Gly
100             105             110

Ala Ser Asp Ser Asn Val Tyr Arg His Leu Lys Asp Leu Glu Glu Gly
115             120             125

Ile Gln Thr Leu Met Trp Arg Leu Glu Asp Gly Ser Pro Arg Thr Gly
130             135             140

Gln Ile Phe Asn Gln Ser Tyr Ser Lys Phe Asp Thr Lys Ser His Asn
145             150             155             160

Asp Asp Ala Leu Leu Lys Asn Tyr Gly Leu Leu Tyr Cys Phe Arg Lys
165             170             175

Asp Met Asp Lys Val Glu Thr Phe Leu Arg Ile Val Gln Cys Arg Ser
180             185             190

Val Glu Gly Ser Cys Gly Phe
195

```

```

<210>      9

```

<211> 522
 <212> DNA
 <213> Homo sapiens

<400> 9
 ttcccaacca ttcccttata caggcttttt gacaaacgcta tgcctcgcgc ccgtcgccctg 60
 taccagctgg catatgacac ctatcaggag ttgttaagct ctggggtaat ggagtctatt 120
 ccaacacctt ccaacagggt gaaaacgcag cagaatctta acctagagct gctccgcctc 180
 tcctctgctgc tcatccagtc atggctggag ccogtgcagc tctcaggag cgtcttcgcc 240
 aacagcctgg tgtatggcgc ctccggacagc aacgtctatc gccacctgaa ggacctagag 300
 gaaggcatcc aaacgctgat gtggaggctg gaagatggca gcccccgac tgggcagatc 360
 ttcaatcagt cctacagcaa gtttgacaca aaatcgaca acgatgacgc actgctcaag 420
 aactacgggc tgctctactg cttcagggaag gacatggaca aggtcgagac attcctgcgc 480
 atcgtgcagt gccgctctgt ggagggcagc tgtggcttct ag 522

<210> 10
 <211> 173
 <212> FRT
 <213> Homo sapiens

<400> 10
 Phe Pro Thr Ile Pro Leu Ser Arg Leu Phe Asp Asn Ala Met Leu Arg
 1 5 10 15
 Ala Arg Arg Leu Tyr Gln Leu Ala Tyr Asp Thr Tyr Gln Glu Phe Val
 20 25 30
 Ser Ser Trp Val Met Glu Ser Ile Pro Thr Pro Ser Asn Arg Val Lys
 35 40 45
 Thr Gln Gln Lys Ser Asn Leu Glu Leu Leu Arg Ile Ser Leu Leu Leu
 50 55 60
 Ile Gln Ser Trp Leu Glu Pro Val Gln Leu Leu Arg Ser Val Phe Ala
 65 70 75 80
 Asn Ser Leu Val Tyr Gly Ala Ser Asp Ser Asn Val Tyr Arg His Leu
 85 90 95
 Lys Asp Leu Glu Glu Gly Ile Gln Thr Leu Met Trp Arg Leu Glu Asp
 100 105 110
 Gly Ser Pro Arg Thr Gly Gln Ile Phe Asn Gln Ser Tyr Ser Lys Phe
 115 120 125
 Asp Thr Lys Ser His Asn Asp Asp Ala Leu Leu Lys Asn Tyr Gly Leu
 130 135 140
 Leu Tyr Cys Phe Arg Lys Asp Met Asp Lys Val Glu Thr Phe Leu Arg
 145 150 155 160
 Ile Val Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe
 165 170
 <210> 11

```

<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer GCP Forward

<400> 11
ggggacaagt ttgtacaaaa aagcaggctt cggcacc 37

<210> 12
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer GCP Reverse

<400> 12
ggggaccact ttgtacaaga aagctgggtt tcaatggtga tggatggtt g 51

<210> 13
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer INSP105-exon2F

<400> 13
gcaggcttcg ccaccatggc tgcaggctcc cggacgtccc tgctcctg 48

<210> 14
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer INSP105-exon2R

<400> 14
ggaaggtgtt ggaatagact ccattaccga agagctta 38

<210> 15
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer INSP105- exon3F

<400> 15
agctcttggg taatggagtc tattccaaca ccttcc 36

<210> 16

```

<211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer INSP105- exon3R

 <400> 16
 ggagcagctc taggttagat ttctgctgcg ttttca 36

 <210> 17
 <211> 37
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer INSP105- exon4F

 <400> 17
 aacgcagcag aaatctaacc tagagctgct ccgcatc 37

 <210> 18
 <211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer INSP105- exon4R

 <400> 18
 tgccatcttc cagcctccac atcagcggtt ggatgc 36

 <210> 19
 <211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer INSP105- exon5F

 <400> 19
 ccaaacgctg atgtggagcg tggaagatgg cagccc 36

 <210> 20
 <211> 35
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer INSP105- exon5R

 <400> 20
 gtgatgggtg tgggtggaagc cacagctgcc ctcca 35

 <210> 21

```

<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer INSP105-5' end-R

<400> 21
ggtttagattt ctgctgcggtt ttcacctgt tg 32

<210> 22
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer INSP105-center-F

<400> 22
caacagggtg aaaacgcagc agaaatctaa cc 32

<210> 23
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer INSP105-center-R

<400> 23
ggctgccatc ttccagcctc ca 22

<210> 24
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer INSP105-3' end-F

<400> 24
gcatccaaac gctgatgtgg ag 22

<210> 25
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer pEAK12-F

<400> 25
gccagcttgg cacttgatgt 20

<210> 26

```

<211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer pEAK12-R

<400> 26
 gatggagggtg gacgtgtcag 20

<210> 27
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer M13F

<400> 27
 caggaaacag ctatgacc 18

<210> 28
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer M13R

<400> 28
 tgtaaaacga cggccagt 18

<210> 29
 <211> 129
 <212> DNA
 <213> Homo sapiens

<400> 29
 tcctgtctgc tcatccagtc atgggtggag cccgtgcagc tcttcaggag cgtcttcgcc 60
 aacagcctgg tgtatggcgc ctgggacagc aacgtctatc gccacctgaa ggacctagag 120
 gaaggcatc 129

<210> 30
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 30

Met Ala Ala Gly Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly Leu Leu
 1 5 10 15

Cys Leu Ser Trp Leu Gln Glu Gly Ser Ala Phe Pro Thr Ile Pro Leu
 20 25 30

Ser Arg Leu Phe Asp Asn Ala Met Leu Arg Ala Arg Arg Leu Tyr Gln
 35 40 45
 Leu Ala Tyr Asp Thr Tyr Gln Glu Phe Glu Glu Ala Tyr Ile Leu Lys
 50 55 60
 Glu Gln Lys Tyr Ser Phe Leu Gln Asn Pro Gln Thr Ser Leu Cys Phe
 65 70 75 80
 Ser Glu Ser Ile Pro Thr Pro Ser Asn Arg Val Lys Thr Gln Gln Lys
 85 90 95
 Ser Asn Leu Glu Leu Leu Arg Ile Ser Leu Leu Leu Ile Gln Ser Trp
 100 105 110
 Leu Glu Pro Val Gln Leu Leu Arg Ser Val Phe Ala Asn Ser Leu Val
 115 120 125
 Tyr Gly Ala Ser Asp Ser Asn Val Tyr Arg His Leu Lys Asp Leu Glu
 130 135 140
 Glu Gly Ile Gln Thr Leu Met Trp Arg Leu Glu Asp Gly Ser Pro Arg
 145 150 155 160
 Thr Gly Gln Ile Phe Asn Gln Ser Tyr Ser Lys Phe Asp Thr Lys Ser
 165 170 175
 His Asn Asp Asp Ala Leu Leu Lys Asn Tyr Gly Leu Leu Tyr Cys Phe
 180 185 190
 Arg Lys Asp Met Asp Lys Val Glu Thr Phe Leu Arg Ile Val Gln Cys
 195 200 205
 Arg Ser Val Glu Gly Ser Cys Gly Phe
 210 215

<210> 31
 <211> 597
 <212> DNA
 <213> Homo sapiens

<220>
 <221> Exon
 <222> (1)..(597)

<400> 31
 atg gct gca ggc tcc cgg acg tcc ctg ctc ctg gct ttt ggc ctg ctc 48
 Met Ala Ala Gly Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly Leu Leu
 1 5 10 15
 tgc ctg tcc tgg ctt caa gag ggc agt gcc ttc cca acc att ccc tta 96
 Cys Leu Ser Trp Leu Gln Glu Gly Ser Ala Phe Pro Thr Ile Pro Leu

20	25	30	
tcc agg ett ttt gac aac gct atg ctc cgc gcc cgt cgc ctg tac cag			144
Ser Arg Leu Phe Asp Asn Ala Met Leu Arg Ala Arg Arg Leu Tyr Gln			
35	40	45	
ctg gca tat gac acc tat cag gag ttt gta agc tct tgg gta atg gag			192
Leu Ala Tyr Asp Thr Tyr Gln Glu Phe Val Ser Ser Trp Val Met Glu			
50	55	60	
tct att cca aca cct tcc aac agg gtg aaa acg cag cag aaa tct aac			240
Ser Ile Pro Thr Pro Ser Asn Arg Val Lys Thr Gln Gln Lys Ser Asn			
65	70	75	80
cta gag ctg ctc cgc atc tcc ctg ctg ctc atc cag tca tgg ctg gag			288
Leu Glu Leu Leu Arg Ile Ser Leu Leu Leu Ile Gln Ser Trp Leu Glu			
85	90	95	
ccc gtg cag ctc ctc agg agc gtc ttc gcc aac agc ctg gtg tat ggc			336
Pro Val Gln Leu Leu Arg Ser Val Phe Ala Asn Ser Leu Val Tyr Gly			
100	105	110	
gcc tcg gac agc aac gtc tat cgc cac ctg aag gac cta gag gaa ggc			384
Ala Ser Asp Ser Asn Val Tyr Arg His Leu Lys Asp Leu Glu Glu Gly			
115	120	125	
atc caa acg ctg atg tgg agg ctg gaa gat ggc agc ccc cgg act ggg			432
Ile Gln Thr Leu Met Trp Arg Leu Glu Asp Gly Ser Pro Arg Thr Gly			
130	135	140	
cag atc ttc aat cag tcc tac agc aag ttt gac aca aaa tcg cac aac			480
Gln Ile Phe Asn Gln Ser Tyr Ser Lys Phe Asp Thr Lys Ser His Asn			
145	150	155	160
gat gac gca ctg ctc aag aac tac ggg ctg ctc tac tgc ttc agg aag			528
Asp Asp Ala Leu Leu Lys Asn Tyr Gly Leu Leu Tyr Cys Phe Arg Lys			
165	170	175	
gac atg gac aag gtc gag aca ttc ctg cgc atc gtg cag tgc cgc tct			576
Asp Met Asp Lys Val Glu Thr Phe Leu Arg Ile Val Gln Cys Arg Ser			
180	185	190	
gtg gag ggc agc tgt ggc ttc			597
Val Glu Gly Ser Cys Gly Phe			
195			
<210> 32			
<211> 597			
<212> DNA			
<213> Homo sapiens			
<400> 32			
ctggctgcag gctcccgac gtcctgctc ctggcttttg gctgctctg cctgtcctgg			60

```

cttcaagagg gcagtgccctt cccaaccatt cccttatcca ggctttttga caacgctatg 120
ctccgcgcgc gtcgcctgta ccagctggca tatgacacct atcaggagtt tgtaaactct 180
tgggtaatatg agtctattcc aacaccttcc aacagggtga aaacgcagca gaaatctcac 240
ctagagctgc tccgcctctc cctgctgctc atcgagtcgt ggctggagcc cgtgcagttc 300
ctcaggagtg tcttcgcca cagcctgggt tacgggcctc ctgacagcaa cgtctatgac 360
ctcctaaagg acctagagga aggcattccaa acgctgatgt ggaggctgga agatggcagc 420
cccgcgactg ggcagatctt caagcagacc tacagcaagt ttgacacaaa ctgcacaaac 480
catgacgcac tgcacaagaa ctacgggctg ctccactgct tcagggaagga catggacaag 540
gtcgagacat tccctgcgat cgtgcagtg cgtctgtgtg agggcagctg tggcttc 597

```

```

<210> 33
<211> 589
<212> DNA
<213> Homo sapiens

```

```

<400> 33
atggctccgg acgtccctgc tcttgctttt tggcctgctc tgccctgccct ggcttcaaga 60
gggcagtgcc ttcccaacca ttcccttctc caggcttttt gacaacgcta tgcctccgcg 120
ccatcgtctg caccagctgg cctttgacac ctaccaggag ttgttaagct ctctggtaat 180
ggagttctatt ccaacacctt ccaacagggt gaaacgcgag cagaatctta acctagagct 240
gtcccgcatc tccctgctgc tcattccagtc atggctggag ccgctgcagc tctcaggag 300
cgtcttcgac aacagccttg tgtatggcgc ctgggacagc aacgtctatc gccacctgaa 360
ggacctagag gaaggcatcc aaacgctgat gtggaggctg gaagatggca gccacctgac 420
tgggcagacc ctcaagcaga cctacagcaa gtttgacaca aactgcgaca acctgacgc 480
actgctcaag aactacgggc tgctccactg cttcaggaag gacatggaca aggtcgagac 540
attcctgcgc atcgtgcagt gccctctctg ggagggcagc tgtgcttc 589

```

```

<210> 34
<211> 468
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (8)..(8)

```

```

<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (12)..(12)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (28)..(28)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (51)..(51)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (55)..(55)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (77)..(77)
<223>  n is a, c, g, or t

<400>  34
atggctgnag gntcccgac gtcctgntc ctggcttttg gctgggtctg notgncctgg      60
cttcaagagg gcagtgncctt cccaaccatt cccttatcca ggctttttga caacgctatg      120
ctccgcgccc gtgcgctgta ccagctggca tatgacacct atcaggagtt tgtaagctct      180
tgggtaatgg agtctattcc aacaccttcc aacagggtga aaacgcagca gaaatctaac      240
ctagagctgc tccgcatcca aacgctgatg tggaggctgg aagatggcag cccccggact      300
gggcagatct tcaatcagtc ctacagcaag ttgacacaa aatcgacaaa cgatgcagca      360
ctgctcaaga actacgggct gctctactgc ttcaggaagg acatggacaa ggtcgagaca      420
ttcctgogca tcgtgcagtg ccgctctgtg gagggcagct gtggcttc      468

<210>  35
<211>  677
<212>  DNA
<213>  Homo sapiens

<220>
<221>  Exon
<222>  (34)..(648)

```


cac cat cac cat cac cat tgaacccag cttctctgta caaagtgg
His His His His His His
200 205

677

<210> 36
<211> 9
<212> DNA
<213> Artificial sequence

<220>
<223> Partial sequence of the Gateway attB1 site

<400> 36
gcaggcttc

9

<210> 37
<211> 6
<212> DNA
<213> Artificial sequence

<220>
<223> Partial sequence of the Kozak sequence

<400> 37
gccacc

6